

WHAT IS CLAIMED IS:

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1. A system for providing notifications of computer system events to clients, comprising, a central service for receiving system events and for firing event notifications in response thereto, a registration mechanism for clients to register for notification of one or more types of events, and a distribution mechanism for communicating a fired event notification to each client registered for notification thereof based on the type of event notification.
 2. The system of claim 1 wherein the registration mechanism and distribution mechanism are incorporated in a loosely coupled events database, and wherein the central service is a publisher and each client is a subscriber.
 3. The system of claim 1 wherein the notification includes activating, starting or running a program or script.
 4. The system of claim 1 wherein the client registers for notification for a type of event with the registration mechanism and includes condition information therewith, and the distribution mechanism includes a filtering mechanism for selectively communicating an event notification based on at least one condition.

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a2*) 5. The system of claim 3 wherein the registration mechanism and distribution mechanism are incorporated in a loosely coupled events database.

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CY*) 6. The system of claim 1 wherein the central service receives at least some of the system events from an operating system.

7. The system of claim 1 wherein the system event includes information related to the power state of the machine.

8. The system of claim 1 wherein the system event includes information related to the logon state of the machine.

9. The system of claim 1 wherein the central service receives system event information related to a network.

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a3*) 10. The system of claim 1 wherein the central service includes a plurality of time-based caches for caching network information, and a mechanism for evaluating the caches to determine a connectivity state of a network.

11. The system of claim 10 wherein the time-based caches maintain counts corresponding to network activity.

12. The system of claim 11 wherein the time-based counts corresponding to network activity include counts of incoming packets, outgoing packets, incoming errors and outgoing errors.

SAC 13. The system of claim 12 wherein the mechanism for evaluating the caches determines that the connectivity state of the network is true if the incoming packet counts have increased.

14. The system of claim 12 wherein the mechanism for evaluating the caches determines that the connectivity state of the network is false if the outgoing packet counts have increased and the incoming packet counts have not increased.

15. The system of claim 1 wherein the client includes a COM object, and the firing of an event results in a call to a method of the COM object.

16. The system of claim 15 wherein the COM object includes interfaces for receiving fired events.

17. The system of claim 16 wherein each interface for receiving fired events has at least one method accessible therethrough that corresponds to a type of event.

18. The system of claim 1 wherein the central service further includes a mechanism for determining whether a network destination is reachable.

19. The system of claim 18 wherein the mechanism for determining whether a network destination is reachable is associated with a list of network destinations.

20. The system of claim 19 wherein the mechanism for determining whether a network destination is reachable regularly polls each destination in the list to make a determination as to the reachability thereof.

21. The system of claim 20 wherein the mechanism for determining whether a network destination is reachable determines that a destination is not reachable if the name of

the destination is not resolvable into an Internet protocol address.

22. The system of claim 20 wherein the mechanism for determining whether a network destination is reachable determines that a destination is reachable if the Internet protocol address of the destination corresponds to a local subnet.

Sel 25 23. A computer-readable medium having computer-executable instructions for performing steps comprising:

- a) receiving system information at a central service;
- b) publishing an event notification in response thereto, the event notification having an event type associated therewith;
- c) receiving the event notification at a loosely coupled events database;
- d) matching the event notification with at least one client that has subscribed for event notification based on the type of event; and
- e) communicating the event notification to each client that has subscribed therefor.

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24. The computer-readable medium of claim 23 having further computer-executable instructions for performing the step of, filtering event notifications by selectively communicating event notifications based on at least one condition.

25. The computer-readable medium of claim 23 wherein the central service receives the system information as system events from an operating system.

Sgt) 26. The computer-readable medium of claim 23 wherein the system information includes information related to a network.

Beth C2 27. The computer-readable medium of claim 26 wherein the network is a wide area network, and wherein the step of receiving system information at a central service comprises the step of receiving remote access services events.

28. The computer-readable medium of claim 26 wherein the network is a local area network, and having further computer-executable instructions for performing the step of caching network information corresponding to activity on the local area network.

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29. The computer-readable medium of claim 28 having further computer-executable instructions for performing the step of evaluating cached network information to determine the state of network connectivity.

30. The computer-readable medium of claim 29 wherein the central service publishes an event when the state of network connectivity has changed from a previous value thereof.

31. The computer-readable medium of claim 29 wherein the client includes a COM object, and wherein the step of communicating the event notification to each client comprises the step of calling a method of the COM object.

32. The computer-readable medium of claim 23 having further computer-executable instructions for performing the step of determining whether a network destination is reachable.

33. The computer-readable medium of claim 32 wherein the central service publishes an event when the network destination changes from reachable to unreachable.

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34. The computer-readable medium of claim 32 wherein the central service publishes an event when the network destination changes from unreachable to reachable.

35. The computer-readable medium of claim 32 wherein the step of determining whether the network destination is reachable comprises the step of pinging the destination.

36. The computer-readable medium of claim 32 wherein the step of determining whether the network destination is reachable comprises the step of periodically pinging the destination.

sel a1 } 37. A method for providing information on a state of network connectivity, comprising the steps of, maintaining values indicative of network activity at a first time, obtaining values indicative of network activity at a second time, evaluating the differences between the values at the first time and the second time to determine the state of network connectivity, and selectively outputting the state of network connectivity.

38. The method of claim 37 wherein the step of evaluating the differences between the values at the first

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time and the second time comprises the step of determining a number of incoming packet counts over a period of time.

39. The method of claim 37 wherein the step of evaluating the differences between the values at the first time and the second time comprises the step of determining a number of outgoing packet counts over a period of time.

40. The method of claim 37 wherein the step of evaluating the differences between the values at the first time and the second time comprises the step of determining a number of errors over a period of time.

41. The method of claim 37 wherein the step of evaluating the differences between the values at the first time and the second time comprises the step of determining a number of outgoing packet counts over a period of time relative to a number of incoming packet counts over a period of time.

42. The method of claim 37 wherein the step of selectively outputting the state of network connectivity comprises the step of firing an event when the state of

network connectivity has changed from a previous value thereof.

43. The method of claim 37 wherein the step of selectively outputting the state of network connectivity comprises the step of returning the state of network connectivity as a result in response to a call from a client.

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